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ABSTRACT

In order to prescribe instructional strategies that match individual learning styles, a study examined the relationships among students' gender, communication avoidance behavior, and classroom achievement. Additionally, the study investigated the relationship of the instructor's gender to the student's perception of instructor immediacy and the experiencing of cognitive and affective learning. Data collected on 389 undergraduate students indicated that females experience more communication apprehension (CA) in the classroom, but females were generally more immediate than males. Male students showed a preference for more independent and avoidant learning styles, while female students preferred collaborative and participative learning styles. Interestingly, though female students reported higher CA in the classroom, they experienced more affective and cognitive learning than male students. Overall, communication variables proved to be better predictors of learning than learning style variables. Low CAs learned less and felt worse about themselves in the classroom. Female instructors assigned higher grades and were perceived as more immediate than male instructors. (A 72-item reference list and 4 data tables are appended.) (Author/GPL)

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THE EFFECTS OF COMMUNICATION AVOIDANCE, LEARNING STYLES, AND GENDER UPON CLASSROOM ACHIEVEMENT

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ABSTRACT

In the last decade, a few researchers have examined the contributions of students' communication behaviors to the learning equation. More must be known about the relationships among students' interactional patterns and learning in order to prescribe instructional strategies which match individual styles of learning and interaction. This study examined the relationships among students' gender, communication avoidance behaviors, individual learning styles, and classroom achievement. Data collected on 389 undergraduate students indicated that females experience more apprehension when communicating in the communication classroom, but females were more generally immediate than males. Male students showed a preference for more independent and avoidant learning styles, while female students preferred collaborative and participative learning styles. Interestingly, though female students reported higher CA in the classroom, they experienced more affective and cognitive learning than male students. Overall, communication variables proved to be better predictors of learning than learning style variables. Low CAs learned less and felt less well about themselves in the classroom. Female instructors assigned higher grades, and were perceived as more immediate than male instructors.

THE EFFECTS OF COMMUNICATION AVOIDANCE, LEARNING STYLES, AND GENDER UPON CLASSROOM ACHIEVEMENT

An increasing body of research is concerned with the centrality of communication variables in the learning process.

> Learning, particularly that which takes place in the traditional classroom setting, is an interactional process. While curriculur decisions, materials development, the organization of lectures and the like focus primarily on the teacher's transmission of content--and student evaluation on comprehension and retention of that content--there is little disagreement that interpersonal perceptions and communicative relationships between teachers and students are crucial to the teacher-learning process (Richmond, Gorham, & McCroskey, 1986).

Recent studies have examined the impact of communication variables such as affinity and compliance-gaining strategies (Kearney, Plax, Richmond, & McCroskey, 1985; McCroskey & McCroskey, 1986) communication style (Andersen, Norton, Nussbaum, 1981; Norton, 1977; Nussbaum & Scott, 1979; Stohl, 1981), interpersonal attraction and solidarity (Andriate, 1982; Foster, Pearson, & Imahori, 1984; Stohl, 1981), nonverbal immediacy (Allen, Long, O'Mara, 1985; Andersen, 1979; Andersen & Withrow, 1981; Kearney, Plax, & Wendt-Wasco, 1985; Richmond, Gorham, McCroskey, 1986; Stewart & Wheeless, 1986;), and a myriad of related variables (Gorham, 1985; Staton-Spicer & Marty-White, 1981; Prisbell, 1985) in student and teacher interactive processes at all educational levels--elementary, secondary, undergraduate, graduate, adult, and applied. It should be noted that most of this research is concerned with either the teacher's communication behavior or his/her perception of students' communication behaviors. Some few attempts, largely concerned with communication apprehension, have attempted to examine the contributions of students' communication competencies, skills, and behaviors to the learning equation, but the effects of student communication behaviors on the learning process have not been saliently studied.

Without knowing more about the relationships among students' interactional patterns, communication skills, and learning, there is little of hope of succeeding in attempts to describe "effective teaching," and to prescribe instructional strategies which match individual styles of learning and interaction. If effective communication in the classroom is, as instructional communication theorists purport, precursor to learning (Friedrich, 1978; Norton,

1977; Nussbaum & Scott, 1979), it is imperative to examine the student aspect of the classroom communicative transaction. Miller (1978) has suggested that interpersonal communication is characterized by a "developmental" approach where the person is dealt with as a unique individual instead of as an object. The overemphasis on instructor strategies and communication behaviors comes pretty close to defining the student as "object." Many educators have traditionally subscribed to a view of the learning process operating similarly for all students. This approach has placed greater emphasis on the amount of contact, quantity of information, persuasion, and situational variables, as opposed to individual differences, interpersonalness, and quality of interaction.

In their 1980 paper Andersen and Bell-Daquilante argued that student communication predispositions and behaviors are potential indicators of learning style preferences, and that different learning patterns mediate learning processes and shape educational outcomes. The purpose of the study reported here was to examine the relationships among students' gender, communication avoidance behaviors, individual learning styles, and classroom achievement. Additionally, the relationship of instructors' gender to students' perceptions of immediacy and learning outcomes was examined.

Studies across disciplines have linked students' gender to learning outcomes. Interestingly, math anxiety, which is experienced more by female than male students, has been linked to lower test scores and grades (Parsons, Adler, & Kaczala, 1982). Of course, evidence from communication classes indicate that speeches by female students are evaluated or commented on more positively (Barker, 1966; Pearson, 1980; Sprague, 1971); women receive higher grades whether the basic communication course emphasis is performance-oriented or theoretical (Pearson, 1982), interpersonal or public speaking (Allen, 1984; Pearson & Nelson, 1981). Roberts and Pearson (1984) concluded that since differences in the grades of males and females could not be explained on the basis of prior academic evaluation, aptitudes measured by standarized tests, or psychological sex characteristics, differences in evaluations may be explained by the females' communication competence, especially superior decoding skills. Hughey (1984) found competence to be slightly better than compliance in explaining the favorable evaluations received by female students in communication classes. Hughey also found female students to have more flexible response modes. The fact that female students tend to receive paradoxical grades in math and communication classes, and the indication of ties to response modes suggests that some learning differences may be because of certain gender related characteristics of learning styles.

It has been persuasively argued that more exposure to the classroom does not result in greater learning because individual learning styles differ and mediate the learning process (Schnucker, Heun, & Heun, 1977), and studies have indicated that classroom instruction could be enhanced by considering individual student characteristics (Dowaliby & Schumer, 1971; Stone, 1976; Stricker, Jacobs, & Kogan, 1970). Most approaches assess learning styles along similar lines. For example, Riechmann & Grasha (1974) factored out six student learning styles: independent, dependent, avoidant, participant, collaborative, and competitive. Others report such dimensions as concrete experience, abstract conceptualization, active experimentation, reflective observation (Kolb, 1976); analytic, relational, mixed, and conflicting cognitive styles (Cawley, Miller, & Milliagan, 1976). As can be seen by examining the dimensions listed, they appear similar to characteristics which are often used to distinguish male and female behaviors (Bem, 1974, Wheeless & Dierks-Stewart, 1981). Furthermore, some relationships to communication behavior have been suggested. Riechmann and Grasha found the dimensions of collaborative, dependent, and competitive to be more related to an interpersonal orientation. Andersen and Bell-Daquilante (1980) found concrete dimensions of communication style to be associated with preferences for more concrete learning experiences, and immediacy and active communication styles were associated with more active learning styles. More reflective learners were less open and immediate. These outcomes suggest a link between communication predispositions, behaviors, and learning styles. Further, it is suggested that gender may interact with learning styles.

The focus in this study was on the relationship between learning styles and certain communication avoidance behaviors--specifically communication apprehension (CA) and nonverbal immediacy. Of course, CA has been found to be definitely related to a person's overall personality (Richmond & McCroskey, 1985). An increasing body of research has shown that the behavioral and personality correlates of communication apprehension , an individual's fear or anxiety associated with either real or anticipated communication with another person or persons (McCroskey, 1984), are personal, social, occupational, and educational handicaps for approximately 20 percent of the U.S. population (Payne & Richmond, 1984). Personality traits have also been studied as predictors of individual learner characteristics (Entwistle & Entwistle, 1970; Goldberg, 1969; Tallmadge, & Shearer, 1969; 1971). Knowledge of the relationship between CA and learning styles may help teachers to understand more about how individual students approach the learning environment, and assist in classroom innovations appropriate to students learning needs.

Instructors' awareness of students' personality characteristics and learning needs has been found to be related to general anxiety manifest in the classroom (Dowliby & Schumer, 1971). More specific to the study reported here, Andersen and Bell-Daquilante found that students high in CA preferred a more passive learning style. Lower CA and greater desire to be involved in communication were positively associated with an active experimentation learning style and negatively associated with a reflective observation style. Not surprisingly, the behaviors of high and low CAs have been found to differ markedly in the classroom environment.

Even though no meaningful relationship has been found between CA and intelligence (Bashore, 1971; McCroskey, Daly, & Sorensen, 1976), students who are highly apprehensive on average score lower on standarized achievement tests, achieve less than their aptitudes would justify, participate less frequently in class, and are evaluated lower by instructors than are more talkative students (McCroskey & Andersen, 1976; McCroskey & Daly, 1976; McCroskey, 1977; Scott & Wheeless, 1977).

While there is some evidence that differences in student achievement related to CA may not be as acute in non-traditional (e.g., personalized instruction) or communication restricted (large lecture) modes (McCroskey & Andersen, 1976; Scott, Wheeless, Yates, & Randolph, 1977), there is general agreement that students high in CA suffer academically (McCroskey, 1977; Hurt & Preiss, 1978). In performance-oriented classes, regardless of type (e.g., discussion, interpersonal, public speaking), students with high CA are consistently evaluated lower (Powers & Smythe, 1980; Allen 1984). Furthermore, research into the mediational effects of other variables has served to increase the generalizability of a relationship between CA and academic achievement. For example, Davis and Scott (1978) found the amount of verbal activity to be a less compelling explanation, and Andriate and Allen (1984) found that language proficiency was not a mediating factor in students' levels of CA and academic achievement. Yet, those who are high CAs are likely to be perceived as lacking in communication skills and be evaluated lower.

The existing research is inconclusive as to whether males or females tend to be more anxious when communicating. Little difference in generalized levels of CA seems to exist; however, females have been found to be slightly more apprehensive in formal communication contexts--meetings and public speaking, while males have been found to be more apprehensive in interpersonal contexts (Greenblatt, Hasenauer, & Freimuth, 1980; Talley & Richmond, 1980; McCroskey, Simpson, & Richmond, 1982; Allen, 1984; Allen,

O'Mara, & Andriate, 1986; Andriate & Allen, 1984). The meeting construct, as measured by the PRCA-24, is thought to assess behaviors isomorphic with classroom communication (Richmond & McCroskey, 1985). The question of whether CA interacts with gender, personalized learning styles, and learning outcomes has not been as yet addressed. However, Allen (1984) found that females who were high CAs received lower grades in both interpersonal and public speaking basic courses than those females who reported either moderate or low levels of CA, but females who were high CAs received higher grades than males who were high CAs. Leary (1983) has theorized that since there is general agreement that women are currently socialized to convey impressions of sensitivity, tenderness, and nurturance, and such, "traditionally" socialized "feminine" women would probably be apprehensive in communication situations calling for assertive behaviors. This traditional socialization may interact with CA and learning styles in positive or negative ways in the classroom.

The "learned helplessness" explanation of the development of CA suggests that individuals learn to feel anxious in situations when they perceive little control over their fate. Communicating in such contexts--and sometimes the classromm may be such a context--may result in lowered thresholds culminating in heightened anxiety, withdrawal, and a willingness to suffer the negative consequences of not communicating (McCroskey, 1984; Richmond & McCroskey, 1985). This avoidance behavior of those who are highly apprehensive about communicating results from negative attitudes that individuals have toward engaging in communication activities. Avoidance behaviors may also be a negative manifestation of a more global communication construct labeled "nonverbal immediacy," the degree of perceived physical or psychological closeness between communicators (Andersen, 1979).

Behaviorally, immediacy is the actual approach behaviors of a person toward another person or situation, while nonimmediacy is the actual avoidance of a person or situation (e.g., communication). Affectively, people are nonverbally immediate with things, people, and situations they like, while being nonverbally nonimmediate with things, people, and situations they don't like (e.g., communication) (Mehrabian, 1971). Hence, the high CA might be expected to be less behaviorally immediate in the classroom because of his/her dislike and fear of communication situations.

Those who are less immediate are perceived by others as less likeable, less friendly, and generally less attractive (McCroskey, Richmond, & Stewart, 1986; Richmond, McCroskey, & Payne, 1987) Iikewise, students who are high CAs are viewed as less attractive (Richmond & McCroskey, 1985), and evidence indicates that students who are perceived as less

attractive are evaluated lower (Foster, Pearson, & Imahori, 1984). It is logical, therefore, that both CA and immediacy would be factors in the evaluation of students.

Previous studies found that students' perceptions of teacher immediacy were strong predictors of affective learning, but little relationship has been found between such perceptions and cognitive learning (Allen, Long, O'Mara, 1985; Anderson, 1979; Anderson, Norton, & Nussbaum, 1981; Andersen & Withrow, 1981; Rodgers & McCroskey, 1984; Kearney, Plax, & Wendt-Wasco, 1985) However, Richmond, Gorham, and McCroskey (1986), using students' subjective, self-reports of cognitive learning, concluded that the teacher's level of immediacy, as perceived by his/her students, will determine both the level of cognitive and affective learning generated. Andersen and Bell-Daquilante (1980) found high levels of immediacy to be associated more with active rather than passive learning styles. Stewart and Wheeless (1986) reported that the effects of immediacy varied with the instructional context. Effects may also vary in terms of learners' styles of collecting, internalizing, and assimilating information.

Generally, positive correlations have been found between a person's degree of CA and his/her perception of self-immediacy (Allen, Richmond, & McCroskey, 1984; Richmond, McCroskey, Baldwin, & Berger, 1984; Allen & O'Mara, 1985). However, studies of immediacy and learning have examined the effect of teacher immediacy as perceived by students. The study reported here investigated students' perceptions of their own immediacy and its affect on their learning. Mehrabian (1981) indicates that immediacy is the interaction between two people, and "includes greater physical proximity and/or more perceptual stimulation of the two by one another" (p. 14). It is necessary therefore to consider, in addition to the effects of teachers' immediacy, the effects of students' general and contextual immediacy in the learning environment.

RESEARCH QUESTIONS

Some studies have examined the effects of teacher sex, and differences related to evaluation and teacher/student relationships have been found (Fraser & Fisher, 1982; Hall, 1982; Martin-Reynolds & Reynolds, 1983; Rosenfeld, 1983).

Rosenfeld & Jarrard (1985) reported that liked classess were those which students described as more involving and supportive, and that communication climate in the classroom had much to do with the coping behaviors of students. Since it is likely that students' individual learning styles, and communication avoidance tendencies affect their perception of that climate and ultimately learning, the following research questions were examined:

1. Do female and male students differ in terms of levels of communication apprehension experienced either generally or in generalized contexts?

2. Do female and male students differ in terms of perceptions of immediacy experienced generally and varying classroom contexts?

3. Do female and male students differ in terms of reports of their individual learning styles?

4. Are the relationships among communication apprehension, immediacy, learning styles, and learning--cognitive and affective--different for female and male students?

5. Are students' perceptions of instructor immediacy and the experiencing of cognitive and affective learning related to the gender of the instructor?

SUBJECT SELECTION AND PROCEDURES

Communication apprehension and immediacy instruments were administered to 389 undergraduate students enrolled in the required basic communication skills course at a medium-sized private university in New England. The subject pool contained 180 females and 209 males. There were 14 female and 10 male instructors. All sections had the syllabus, texts, midterm and final examination questions, most written and oral assignments, and the weighting of various components in determining the final grade in common. Although grading was done by individual instructors, similar evaluation procedures and norms were used.

Instruments

Communication apprehension was conceptualized in terms of trait-like anxiety associated with four separate oral communication contexts, and operationally defined as the score received on the 24 item Personal Report of Communication Apprehension (McCroskey, 1986). The PRCA-24 has demonstrated internal reliability coefficients of .96

(McCroskey, 1982). In this study the reliability coefficient for the total PRCA was .92.

Nonverbal immediacy was measured by four likert-type scales. After reading a definition of nonverbal immediacy, students were asked to indicate on scales from one to seven (1 being highly immediate, 7 being lowly immediate) the extent of their immediacy generally, with fellow students, with university instructors generally, and with the instructor of their communication course.

Individual student learning styles were measured using the Grasha-Reichmann Student Style Scale (Reichmann & Grasha, 1974). The six dimensions were used intact, produced reliability coefficients of .79 for independent, .71 for dependent, .73 for avoidant, .78 for participant, .80 for collaborative, and .71 for competitive.

Affective learning was measured by semantic differential scales, with a range from one to seven spaces. The scales were designed to measure student affect toward the communication practices suggested in the course, toward the content of the course, toward the course instructor, and toward the course in general. These scales have yielded high reliablililty in previous studies (Andersen, 1979; Andersen, et al., 1981; Kearney, et al., 1985). Alpha coefficients in this study were .66 for communication practices, .64 for content, .85 for instructor, and .72 for the course in general.

Final grades assigned by the instructors were used as a measure of cognitive learning. However, it should be pointed out that such grades have been criticized as an index of cognitive learning. Of course, there is the possibility of a degree of subjectivity in such ratings, but certainly the gestalt is important in terms of the influences that students' communication behaviors may have on teachers' evaluations. As a check on this criticism, it was decided to also use students' prediction of their final grade as a criterion variable of cognitive learning. It was reasoned that students will make such a prediction mostly on feeling about what they have learned. Of course, there is always the possiblility that some of the students' selective perception of their instructors' behavior toward them may be weighted into their predicted grades. Nevertheless, it was felt that students' predicted grades were more likely to approximate their perception of what they had learned in the course. The idea of using test scores as a measure of cognitive learning was rejected because of the possibility of bias in terms of learning styles.

RESULTS

Table 1 indicates that females reported experiencing significantly more CA than males overall ($F=5.52$, $p<.02$), and in meeting/classroom ($F=3.67$, $p<.05$) and public speaking contexts ($F=29.92$, $p<.0001$). However, female students reported being more generally immediate than males ($F=7.50$, $p<.007$). There were no significant differences in female and male students' perceptions of their immediacy with fellow students, university teachers generally, or their specific communication instructor.

Male and female students differed significantly in preferences for two learning styles. Males indicated that they were more independent ($F=7.67$, $p<.007$) and more avoidant ($F=3.47$, $p<.05$) in the classroom than were females. Males and females did differ in their use of dependent, collaborative, competitive, and participant learning styles.

Female students experienced more affective and cognitive learning. Affectively, more females indicated that they found the communication practices in the course helpful in their lives ($F=6.10$, $p<.02$). They liked their communication course ($F=3.68$, $p<.05$) and their instructor ($F=3.89$, $p<.05$) more than did the males.

Table 2 reveals that CA correlates moderately, but significantly, with general immediacy ($r=.31$), immediacy with fellow students ($r=.31$), immediacy with teachers generally ($r=.32$), and immediacy with the instructor in the communication class ($r=.35$). As would be expected, stronger correlations were found among the contextual dimensions of immediacy. General immediacy was moderately related to immediacy with university instructors generally ($r=.35$) and with the communication course instructor ($r=.41$). General immediacy was more strongly related to immediacy with fellow students ($r=.56$). Student immediacy was also more strongly correlated with immediacy with instructors generally ($r=.47$) and the instructor of the communication course ($r=.48$). The strongest correlation was between immediacy with university instructors generally and immediacy with the instructor in the communication course, indicating those who are more immediate with their communication instructor are more immediate with instructors generally.

Neither CA or immediacy were strongly correlated with the learning styles studied; however, some interesting tendcies were revealed by those low to moderate correlations which were significant. There is a slight negative correlation between CA--generally and contextually--and the collaborative learning style (general CA $r=-.24$, group CA $r=-.18$, meeting CA $r=-.19$, dyadic CA $r=-.16$, public speaking CA $r=.25$). This suggests that the collaborative style is

used more by those students who experience less CA. The contexts of immediacy were also slightly, but significantly negatively correlated with the collaborative learning style (general immediacy r=-.16, immediacy with fellow students r=-.20, general instructor immediacy r=-.16, communication instructor immediacy r=-.16), suggesting that those higher in immediacy were more collaborative in the classroom. The contexts of general (r=.17) and student immediacy (r=.16) were slightly positively correlated with the avoidant style, while immediacy with instructors generally (r=25) and immediacy with the communication course instructor (r=30) correlated moderately, but positively, with the avoidant learning style. This suggests a tendency for less immediate students to be more avoidant in the classroom. The dependent learning style was slightly, but significantly, correlated with immediacy with instructors generally (r=-.19) and immediacy with the communication course instructor (r=-.19), and the particpant learning style correlated with general instructor immediacy (r=-.18) and communication course instructor immediacy (r=-.21). The negative direction of these correlations suggests that those students who are higher in dependent and participant learning styles are also more immediate.

Table 3 reveals that low CAs were more immediate in all contexts than were moderate or high CAs, and moderate CAs were significantly more immediate in all contexts than were high CAs. Low CAs also reported more affective learning than moderate or high CAs. In other words, low CAs indicated more likelihood of using the behaviors recommended in the course, found the subject matter more valuable, and liked the instructor more than did moderate and high CAs. Moderate CAs likewise reported more affective learning than did high CAs. Cognitive learning was also greater for low CAs than moderate or high CAs, both in terms of predicted and actual grade. Moderate CAs predicted they would receive higher grades than did high CAs, but grades assigned by the instructors were not significantly different for moderate and high CAs.

Unexpectedly, Table 3 also shows that low, moderate, and high CAs did not significantly differ in terms of their learning style preferences.

Instructor sex was definitely a factor in students' perceptions of the instructors' immediacy, and learning outcomes (Table 4). As was reported earlier, there were no differences between female and male students in terms of perceptions of instructor immediacy, but when it came to the instructors' sex, students as a whole, regardless of gender, perceived definite differences. Male instructors in the communication class were perceived as less immediate ($F=3.99$, $p<.05$). Students liked the instructor more when the instructor was a woman ($F=4.99$, $p<.03$). Moreover, they

predicted that female instructors would assign them higher grades ($F=9.47$, $p<.002$), and such was the case ($F=3.70$, $p<.05$). However, sex of the instructor did not differentiate two of the affective learning variables, the likelihood of using behaviors recommended in the course and the value of course content.

CONCLUSIONS

In this study, as has been the case in previous studies, females were found to be more apprehensive overall because of higher CA scores in meeting and public speaking contexts. Females were more generally immediate, but were found not to express more nonverbal immediacy than males in classroom contexts. In terms of learning styles, males were more independent and avoidant than females.

Because of higher levels of CA in formal contexts, especially in the meeting context, which is thought to be synonymous with classroom, it would be expected that females would learn less than males. Previous studies have shown that students who are high in CA perform less well and are evaluated lower in the classroom. However, in this study, female students, despite being more apprehensive, reported more affective and cognitive learning. Female students indicated that they would make more use of the behaviors recommended in their communication course, valued course content more, and liked the instructor more than did male students. Female students predicted that they would receive higher grades than male students, which they in fact did. It therefore seems that while students high in CA perform and are evaluated less highly, that females who are high in CA out-perform, or at least or evaluated higher than males in communication classes.

Some previous studies have suggested that female students may receive higher grades in communication classes because they are more competent (Roberts & Pearson, 1982; Hughey, 1984), or at least females are more responsive than male students in the communication classroom (Hughey, 1984), but evidence relative to such explanations is still inconclusive and speculative. McCroskey and Beatty (1986) have contended that motivation to achieve a grade may offset the effects of communication apprehension. Perhaps, the desire to achieve a particular grade may also make females more responsive, and cause them to appear more competent. It may also be that there is a strong correlation between immediacy and motivation. Future studies should explore these issues in depth.

This study indicates that communication variables are better predictors of learning than the so-called learning style variables. These results were surprising in light of

the correlations of the learning variables with both CA and immediacy.

Low CAs learned less, and felt less well about themselves in the classroom. These results would suggest that more emphasis in communication education generally and teacher training specifically should be put upon dealing with communication in the classroom. Moreover, these results (If they hold up in future studies.) indicate that there are gender differences for instructors which influences both perception of classroom learning and the actual grades received. Students feel better in classes taught by females and seen to learn more. These results need to be futher investigated in terms of the research which has already been done relative to psychological gender (Bem, 1974; Wheeless & Dierks-Stewart, 1981). The steoreotypical male communication style may be a hindance to learning.

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TABLE 1

STUDENTS' MEAN SCORE FOR COMMUNICATION APPREHENSION, IMMEDIACY, AND LEARNING STYLES BY SEX

Variable	----Sex---- Female (n=180)	Male (n=209)	
Comm. App.			
Group	14.78	14.49	
Meeting	17.01	16.00	(<.05)
Dyad	14.48	14.76	
Public	21.26	18.53	(<.0001)
Overall	67.47	63.78	(<.02)
Immediacy			
General	2.75	3.11	(<.007)
Student	2.98	3.19	
Gen. Teacher	3.44	3.36	
Com. Teacher	3.03	3.10	
Learning Styles			
Independent	46.75	49.21	(<.007)
Dependent	50.63	50.38	
Avoidant	30.85	34.89	(<.05)
Collaborative	53.45	53.32	
Competitive	39.70	41.56	
Participant	58.77	56.37	
Affective Learning			
Comm. Prac.	1.90	2.17	(<.02)
Course	1.87	2.09	(<.05)
Instructor	1.74	1.95	(<.05)
Cognitive Learning			
Pred. Grade	3.38	3.23	(<.04)
Assigned Grade	2.93	2.49	(<.0002)

TABLE 2

CORRELATIONS AMONG PRCA, IMMEDIACY, AND LEARNING STYLES SCORES

	1	2	3	4	5	6	7	8	9	10	11
1	---	.31*	.31*	.32*	.35*	-.17*	-.11	.11	-.24*	.006	-.11
2	---	---	.56*	.35*	.41*	.02	-.15	.17*	-.16*	.06	-.12
3	---	---	---	.47*	.48*	.07	-.13	.16*	-.20*	.04	-.12
4	---	---	---	---	.74*	.06	-.19*	.25*	-.16*	.003	-.18*
5	---	---	---	---	---	.08	-.19*	.30*	-.16*	.05	-.21*
6	---	---	---	---	---	---	.05	.04	.27*	.27*	.11
7	---	---	---	---	---	---	---	-.06	.10	.16*	.33*
8	---	---	---	---	---	---	---	---	-.36*	.26*	-.79*
9	---	---	---	---	---	---	---	---	---	.21*	.43*
10	___	---	---	---	---	---	---	---	---	---	.05

1=PRCA
2=General Immediacy
3=Student Immediacy
4=Gen. Teacher Imm.
5=Comm. Teacher Imm.
6=Independent Style
7=Dependent Style
8=Avoidant Style
9=Collaborative Style
10=Competitive Style
11=Participant Style

* = $p<.05$

TABLE 3

STUDENTS' MEANS FOR IMMEDIACY, LEARNING STYLES, AND LEARNING OUTCOMES BY COMMUNICATION APPREHENSION LEVELS

Variables	-Communication Apprehension Levels- High CA (PRCA>79)	Moderate CA (PRCA>51 & <80)	Low CA PRCA<52)
Gen. Imm.	3.76a,b	2.91a,b	2.36b
Stud. Imm.	3.79a,b	3.09a,b	2.55b
Gen. Teach. Im.	4.15a,b	3.40a,b	2.76b
Com. Teach Imm.	3.97a,b	3.04a,b	2.46b
Indep. Style	45.81a	48.45a,b	48.63b
Depen. Style	50.90	49.84	52.52
Avoidant Style	50.19	53.79	53.67
Collabor. Style	50.19	53.79	53.67
Compet. Style	41.10	40.40	41.74
Particip. Style	55.86	57.81	57.22
Aff-Com. Prac.	2.41a,b	2.05a,b	1.79b
Aff-Course	2.34a,b	2.03a,b	1.61b
Aff-Instructor	2.16a,b	1.89a,b	1.49b
Predicted Grade	3.02a,b	3.29a,b	3.57b
Assigned Grade	2.67a,b	2.65a,b	2.81b

Matching letters in same row are significantly different at $p<.05$.

TABLE 4

STUDENTS' PERCEPTIONS OF INSTRUCTOR IMMEDIACY AND LEARNING OUTCOMES BY SEX OF THE INSTRUCTOR

Variables	-Sex of the Instructor- Female	Male	
Comm. Inst. Imm.	3.00	3.34	(p<.05)
Aff-Comm. Practices	2.06	2.08	
Aff-Course	1.99	2.06	
Aff-Instructor	1.80	2.09	(p<.03)
Predicted Grade	3.35	3.10	(p<.003)
Actual Grade	2.73	2.43	(p=.05)